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EXAMINER

WU, JINGGE

ART UNIT	PAPER NUMBER
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2623

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Please find below and/or attached an Office communication concerning this application or proceeding.



**DETAILED ACTION**

Applicant's election without traverse of Invention I in paper No. 5 is acknowledged. Accordingly, claims 1-22, 27-34 and 40-47 are now presented for prosecution. Claims 23-26 and 35-39 are withdrawn from consideration.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-8, 11, 14-17, 19-22, 40-45 are rejected under 35 U.S.C. 102(b) as being anticipated by the article "An evaluation of Face and ear biometrics" by Victor et al. (a reference of PTO 1449).

As to claim 1, Victor discloses a method of automatic human identification, said method comprising:

matching an image of a subject's ear against a database of images (fig. 1 and 2) of identified ears to identify said subject (page 429-430).

As to claim 2, Victor further discloses the method of claim 1, further comprising generating said database of images of identified ears (fig. 1, page 429-430).

As to claims 5-6, Victor further discloses a step of eigen-ear and performing an

Art Unit: 2623

eigen ear classification and recognition (fig. 1, page 429-430).

As to claim 7, Victor further discloses weight factor for eigen ear (page 429-430).

As to claim 8, Victor further discloses the eigen-ear recognition procedure comprises identifying said image of a subject's ear as belonging to a class if a vector in said database is found that minimizes a Euclidean distance to said weight vector below a threshold value (page 429-430, inherent for eigen classification).

As to claims 11, 14-17, the discussions are addressed with regard to claims 1-2, 5-8.

As to claims 19-22, 40-45, the discussions are addressed with regard to claims 1-2, 5-7.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10, 18, 28 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Victor.

As to claims 9-10, 18, 28, and 34 Victor discloses a camera to take ear images but does not mention PTZ surveillance camera, omni-directional camera, rainbow-type 3D camera, high resolution ear image, and generating alarm if not matching the images.

However, Examiner takes Official Notice that those feature are well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the features in the method of Victor in order to get better ear images.

Claims 3, 12, 27, 29-33, and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Victor in view of the article "Human ear recognition in 3D" by Bhanu et al. (a reference of PTO 1449).

As to claims 3 and 12, Victor does not mention 3D ear images.

Bhanu, in an analogous environment, discloses:

generating a three-dimensional image of an identified subject's ear (abstract);

generating a plurality of two-dimensional images of said identified subject's ear based on said three-dimensional image (figs. 5-6, page 93-94), wherein each of said plurality of two-dimensional images represents a varied orientation or illumination condition on said three-dimensional image (figs. 5-6).

As to claim 27, the discussions are addressed with regard to claims 1 and 3.

As to claims 29-33, the discussions are addressed with regard to claims 1-2, 5-7.

As to claim 46, the discussions are addressed with regard to claims 1 and 3.

As to claim 47, Bhanu further discloses light projector (inherent if projected light used) and CCD (inherent if a camera used) to receive the reflected light off the ear (figs. 2-6, page 94-96).

***Allowable Subject Matter***

Claims 4, 13, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Contact Information**

Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 306-0377.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 872-9314.

Jingge Wu

Primary Patent Examiner

